

## Does a 'Flipped Classroom' Approach Add Learning Value?

Kelly Clifford, School of Healthcare Practice, University of Bedfordshire

Contact: [kelly.clifford@beds.ac.uk](mailto:kelly.clifford@beds.ac.uk)

### Abstract

This paper is the record of an action research project. The purpose of this action research project was to evaluate the effect of a flipped classroom technique on pre-registration nursing students. The aim was to ascertain if this was a preferred method of teaching to facilitate more practical sessions in class. Feedback from local student surveys indicated that there was a need for more practical sessions in class for both theoretical clarity and for assessment preparation. Qualitative data via a survey was used to gauge the student's perception of methods of differing classroom delivery and a free text box enabled students to voice what session they felt this method was applicable to for future classes. Results showed that the students acknowledged the benefit of having theory of sessions prior to coming to class so that this can be applied to the practical session. Students found value in the flipped classroom approach as a way of supporting and enhancing practical in-class sessions. This was validated further by the students' suggestions of where to further apply this method within the unit.

**Keywords:** flipped classroom, questionnaire, nursing, lecture, qualitative, action research

### Introduction

The flipped classroom is a pedagogical approach that removes theory content from the classroom, allowing the students to access this from home, via recordings, videos or independent reading (Hawks, 2014). Practice based problems and simulation can be used in class to apply this self-directed learning tool (Hawks, 2014). Poor student engagement, decreasing lecturer motivation and stationary curriculum delivery have led to universities and programmes adopting the flipped classroom approach globally (Fulton, 2012; Higher Education Academy (HEA), 2017).

Within a nursing context in higher education, Hawks (2014) further discussed the flipped classroom and its ability for lecture potential. The argument is that the flipped classroom can create more in-depth discussion of its subject content, and becomes about problem solving realistic issues for students instead of information giving (Hawks, 2014). A small action research project was undertaken to determine whether pre-registration adult nursing students preferred a flipped classroom approach to teaching compared with traditional lecture delivery, and whether they felt this method of delivery would improve in-class learning. Action research is a problem solving approach to research, with the emphasis on changing a specific issue or area of practice (Robson, 1997). Cormack (1993) describes it as way of conducting research while problem solving simultaneously. This type of research methodology ensures optimum collaboration between researchers and subjects (Cormack, 1993). It is therefore an appropriate research method for this study,

where the outcome is to facilitate change within the pre-registration nursing programme.

This study was undertaken in relation to lessons I taught within the Acute and Immediate Care unit, within the second year of the adult nursing programme. The research was undertaken for the submission of an action research project assessment within my Postgraduate Certificate in Teaching in Higher Education (PgCTHE) course.

### **Literature review**

The benefits of a flipped classroom approach have been positively discussed by Hawks (2014), who stated that when it was used with nursing students in higher education, both students and staff had positive teaching and learning experiences. Both experienced increased engagement and the added value of more in-depth discussions in the classroom that may not have necessarily occurred with a traditional lecture approach (Hawks, 2014). Fulton (2012) discovered that course failure rates had decreased from 13% to 6% after introducing a flipped classroom approach. However, a study by Missildine et al (2013) wanted to further explore this and see the correlation between using the flipped classroom and student grades and student satisfaction. Their study concluded that satisfaction was less with the flipped classroom approach as students deemed it 'extra' work, even though grades had improved (Missildine et al, 2013). This notion of 'extra work' by the student could be potentially avoided by discussing the expectation of the students prior to commencement (HEA, 2017).

Consideration must also be given to the initial preparation efforts to be made by the lecturer in advance of delivering a flipped classroom session, recognising that pre-class recording and student preparation can be lengthy, and a new technological venture for some lecturers (Educause, 2012). Educause (2012) acknowledges that this model, with its benefits, may need to be introduced slowly to accommodate new ways of teaching and learning. Doing so with careful consideration and ensuring maximum student engagement will allow for a successful implementation of flipped classroom (Educause, 2012; Hawks, 2014). What the flipped classroom does well, as identified by Educause (2012), is to bring about a movement in priorities of both student and teacher from merely covering material, to working towards the mastery of it.

### **Background**

The flipped classroom was trialled during two sessions within the unit, endocrine emergencies and pre- and post-operative surgery emergencies. Students had communicated previously, via the Bedfordshire Unit Survey (BUS), that they had felt overwhelmed with long theory sessions and that they wanted more practical sessions. These practical sessions were felt to be more pertinent in preparing the students for the structure and performance element of the practical assessment within the unit. Traditionally, lecture delivery was either full day lectures, or split with the practical scenario sessions taking place in the afternoon when students were lethargic from a morning's theory. This was intense and laborious for both

students and the lecturer. The University of Bedfordshire (2015), in its CRe8 framework, supports student's involvement in the co-creation of teaching, therefore a catalyst for change was identified. The breaking down of sessions into bite size manageable tasks is discussed by Bligh (1971), who says that smaller units of information are better understood. A pedagogic approach known as blended learning is described by MacDonald (2008) as introducing online media into a programme while recognising the merit for face to face and traditional approaches. This approach echoes Bligh (1971) in the value of bite size, manageable sessions. Boud (1981) contends that autonomous students take responsibility for their own learning rather than being constantly directed, and he includes approaches such as reflecting on the learning process, engaging in self-assessment and learning outside the university setting.

### **Research Methodology**

Qualitative data was collated for this study. A questionnaire was used to gauge perceptions of satisfaction with differing session delivery styles. I wanted to establish the trend of students' perception (McNiff, 2013). There were several limitations to this study. Originally, I wanted to collate this data online with a survey tool. However, prior to the data being collated and validated, the students were required to read a participation sheet and sign a consent form. This, with time constraints, therefore led to facilitating all activities face to face and the students completing a written survey. This, along with a limited time scale for the data collection and submission for my postgraduate assessment deadline, paired with the students not being in teaching due to practical placements, forced the change in data collection.

Quantitative data was extracted to make comparisons and draw conclusions. A Thurstone Scale was used. Devised by Thurstone and Chave in 1929, it was a familiar scale to the students, as its scale was identical to the university's BUS survey, where students choose highly in favour, neutral or less favourable of a number of questions (Robson, 1997). This is similar to the Likert scale (1932) which measures attitude with a summated scale (Robson, 1997). For the purpose of this research the students were asked to scale perception with the descriptive verbs of 'strongly agree', 'agree', and 'neither agree/disagree', 'disagree' and 'strongly disagree'.

Robson (1997) has recognised the challenges that action research can have particularly when thinking of ethical considerations. He recognised the need for a collaborative effort between both parties and brings the aspect of negotiation to the fore when looking at ethical consideration (Robson, 1997). Cormack (1993) further adds to this, stating that action research will fail if there is not a recognised working partnership.

Given this statement by Cormack (1993), it is fair to assume a degree of research bias in this research study, as the participants were students who we had just taught. As noted in the research limitations, despite the questionnaires being anonymous, they were done with the lecturer present. A total of 23 questionnaires were distributed to students, who all consented to participate in the action research project, therefore 100 per cent were completed. The participation of the students

with this research resonates with the Universities CRe8 standard R6, which encourages students to 'be prepared to engage with opportunities to influence aspects of the teaching and assessment you experience' (University of Bedfordshire, 2015).

## Results

Figure 1 shows the 6 statements that students were asked to reflect on and consider. Each question was scaled with degrees of agreement or disagreement with the statement.

Question 1: *I believe the sessions delivered on Panopto allowed me to digest information at my own pace.* – 69.5% definitely agreed with this statement and this was solidified with 30% positively agreeing.

Question 2: *After watching/listening to the Panopto I was able to better apply the theory to the scenarios given in class?* – 56% definitely agreed with this and 43% agreed.

Question 3: *Do you feel this style of learning 'flipped classroom' is applicable to the learning outcomes of the acute and immediate care unit?* – 21% definitely agreed, 60% agreed.

Question 4: *I prefer face to face practice sessions with theory online* - 56% agreed, 8% definitely agreed.

Question 5: *I would like all future theory sessions to be delivered online* – mixed results. No student definitely agreed with this statement, the results were evenly spread, with 26% both agreeing and disagreeing, and 34% definitely disagreeing.

Question 6: *I prefer theory only based sessions* – the majority of students (52%) disagreed that they prefer theory only based sessions, 26 % definitely disagreed with this method of delivery.

The results can be shown as follows:

## Is a 'flipped classroom' approach of added learning value to the student when comparing to traditional lectures?

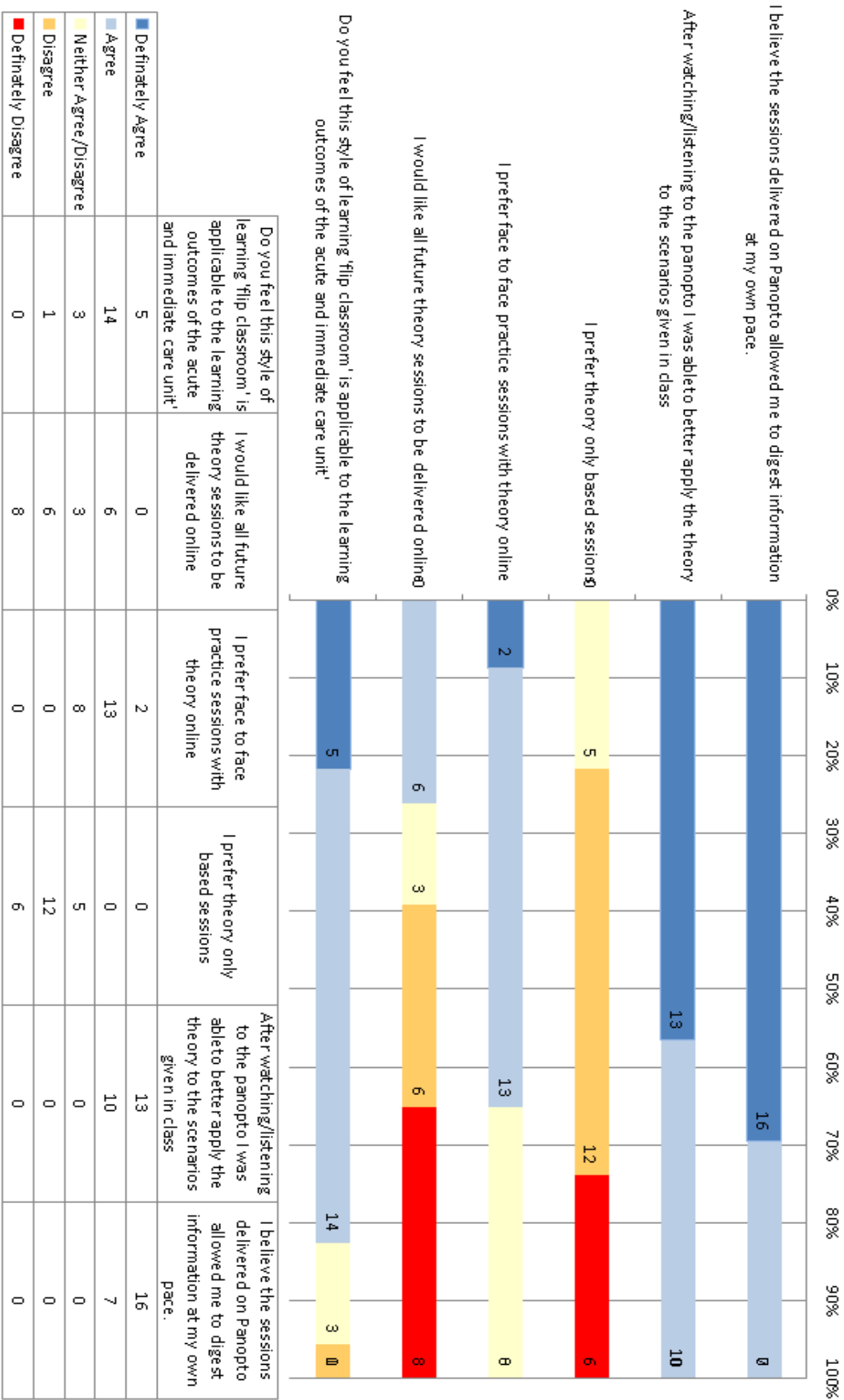
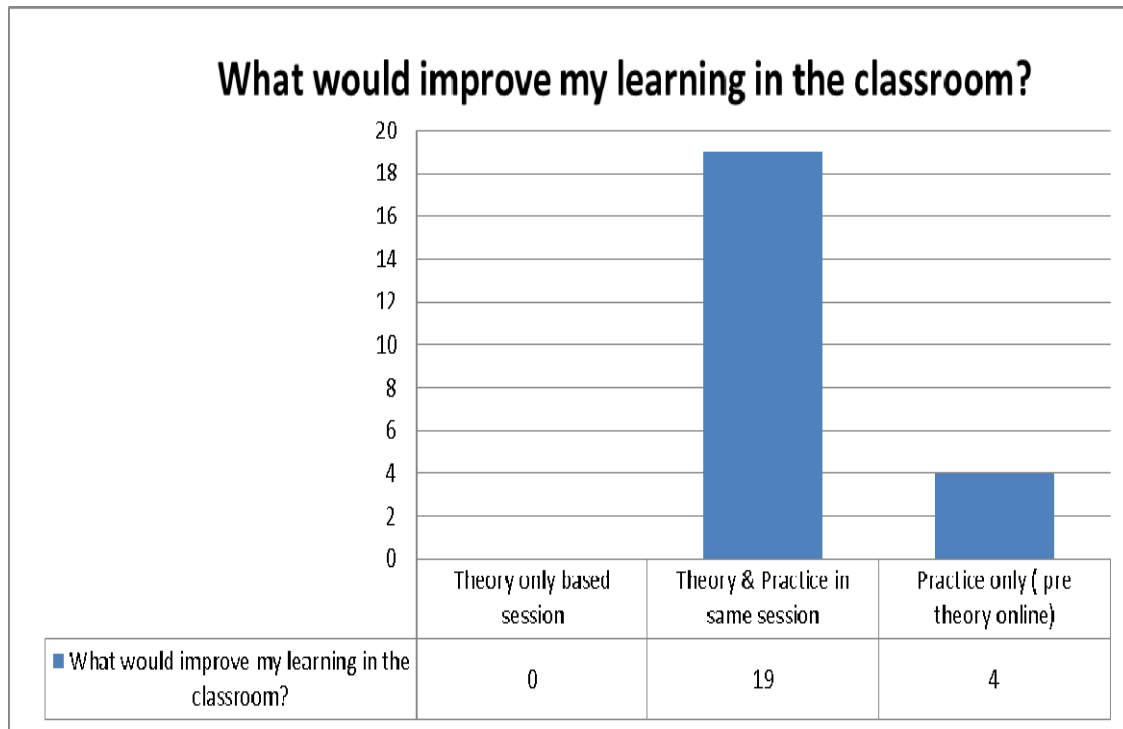


Figure 1

A further question was asked.

Question 7: *What would improve my learning in the classroom?* – A majority of 82% favoured theory and practice to be delivered in the classroom (Figure 2).

**Figure 2**



Finally, students were asked to offer examples of what other sessions they felt the flipped classroom approach could be applied to within the unit. This question was used to try to ascertain what future sessions could be delivered in this way. The HEA (2017) states that it is important to identify where in your class you can flip your classroom. Four students completed this section and gave answers of acute cardiac conditions, stroke and A-E assessment, all of which are suitable sessions for the flipped classroom. It is therefore assumed that these students understood where its value lay within the unit and how it could be mirrored in other sessions.

### Discussion

The results suggest that the students acknowledged the benefit of having theory of sessions prior to coming to class, so that this could be applied to the practical session. This is further supported by their agreement that they did not want a theory only based unit delivery.

Disappointingly, due to the lack of free text responses, and 85% of the students favouring a mixed approach, this showed that perhaps there was a lack of understanding of the flipped classroom approach, and perhaps a failure of myself in ensuring the students understood this process. The HEA (2017) recognises that students require preparation, and having expectations set prior to commencing this

method in the classroom would have ensured that the students were fully prepared. Unfortunately, this was something that I had not considered.

Sessions were available for the students to access on their shared university online learning site, however Fisher, King & Tague (2001) emphasise the importance of recognising a student's readiness for self-directed learning. They state further that this style of learning may even cause anxiety and frustration for some learners who favour more face to face directed teaching (Fisher, King & Tague, 2001). This was something I hadn't considered would even have an impact on the students, and will be something to consider in the future delivery and introduction of this unit. Evidence of engagement was evident from the university's learning platform, Bedfordshire Resources for Education Online (BREO), by tracking what materials the students accessed prior to the session; but this was not evaluated or reflected as a part of this study.

Bligh (1971) supports the methods of flipped classroom as an approach to teaching, but emphasises the importance of applying theory and practical sessions in close succession in order to get its full value. The Cre8 Framework outlines that as lecturers we must ensure that students are actively engaging in the learning process. While this would be an evaluation of our participation in this process, it would also encompass the student's role in being adult independent learners on this course. Fisher, King & Tague (2001), Hawks (2014) and the HEA (2017) echo similar stances on preparing the student on the continuum of self-directed learning, and this must be reiterated for students to understand and appreciate the rationale behind the delivery method of the flipped classroom. A review of nine pedagogic practices, by Husbands & Pearce (2012), concludes that classrooms are complex and multifaceted, with multiple demands, and that finding a successful pedagogic approach can be equally as complicated. Furthermore, they acknowledge that successful pedagogies involve a range of techniques, including structured work and individual activity (Husband & Pearce, 2012). I concur, and from the results of this research the students also favour a mixed method.

The development of increasing flipped classroom delivery for future classes could be used to enhance the student learning experience and bridge the gap of theory and practical sessions within the unit. I acknowledge that for certain undergraduate courses a level of competence and confidence is required for skills, such as communication, debate, and practical skills such as blood pressure monitoring. Such skills need to be first nurtured in class, in safe environments and this method of teaching allows for both to be done in a succinct and timely manner. The flipped classroom enables students to progress from guided learning to becoming independent and autonomous learners.

As a lecturer I believe that this method of teaching was positive, releasing more time to focus on relevant group work and scenarios in class that were practice and assessment focused. I found it encouraging that the students brought into the classroom knowledge that they had obtained from the online resources. Dissemination of these initial findings will be shared among the department,



particularly with colleagues who have a practice based unit, where this would be best applied. I feel that this approach could be used in many disciplines where scenarios, practical and simulations are used alongside theoretical lectures. This will allow for maximum time to be spent on preparation for practice, assessment or employment skills.

### Conclusion

Results of this study are in favour of the flipped learning style of delivery for the Acute and Immediate Care unit. Students found value in this method as a way of supporting practical in-class sessions. Further suggestions of where to apply this method have been suggested by students, and these will be considered. However, to develop this for future classes, more preparation and explanation is required. This could be incorporated into the unit introduction, already embedded in the timetable.

My project has shown the benefits of flipped classroom as a teaching method within the School of Healthcare Practice at the University of Bedfordshire. I believe the use of flipped classroom can be widely adopted by a variety of disciplines within Higher Education, and will allow for a co-created classroom from which students gain value, and which academics can use to be more creative in their lesson delivery. Students becoming autonomous and responsible for their learning will create a mature environment in the classroom, and for academics, students coming prepared for class will allow for a more streamlined and focused delivery of practical simulation and scenario work. It has the potential to release more time in class for targeted peer led activities, drawing from theory learned at home.

### References

- Bligh, D. (1971). *What's the use of lectures?* Exeter: D & B Bligh.
- Boud, D. (Ed.) (1991). *Developing student autonomy in learning*. 2<sup>nd</sup> edn. New York: Nicholas Publishing Company.
- Cormack, D (ed.) (1993). *The Research Process in Nursing*. Second edn. London: Blackwell Scientific Publications.
- Educause (2012) *7 things you should know about ...flipped classroom*. Available at: <https://net.educause.edu/ir/library/pdf/eli7081.pdf> (Accessed 19/04/2017).
- Fisher, M. King, J. Tauge, G. (2001). 'Development of a self-directed learning readiness scale for nursing education', *Nurse Education Today*, Vol 21(7), pp. 516-525. doi: 10.1054/nedt.2001.0589.
- Fulton, K (2012). '10 Reasons to Flip', *SAGE Journals*, Vol 94 (2. pp.20-24.
- Hawks, S. (2014). 'The Flipped Classroom: Now or Never?' *American Association of Nurse Anesthetists -Education News*. Available at: <https://www.aana.com/newsandjournal/20102019/08edunews14.pdf> (Accessed 05/05/2017).
- Higher Education Academy (2017) *Flipped Learning*. Available at: <https://www.heacademy.ac.uk/enhancement/starter-tools/flipped-learning-0> (Accessed 12/04/2017).



- Husbands, C & Pearce, J. (2012). *What makes great pedagogy? Nine claims from research*. Available at:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/329746/what-makes-great-pedagogy-nine-claims-from-research.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/329746/what-makes-great-pedagogy-nine-claims-from-research.pdf) (Accessed 05/05/2017).
- McNiff, J. (2013). *Action Research, Principals and Practice*. Third edn. London: Routledge.
- MacDonald, J. (2008). *Blended Learning and Online Tutoring, Planning Learner Support and Activity Design*. Second edn. Hampshire: Gower.
- Missildine, K. et al. (2013). 'Flipping the Classroom to Improve Student performance and Satisfaction'. *Journal of Nurse Education*, Vol52 (10). pp.597-599.
- Robson, C. (1997). *Real World Research: A Resource for Social Scientists and Practitioner Research*. London: Blackwell.
- The UK Professional Standards Framework. (2011) *The UK Professional Standards Framework for teaching and supporting learning in higher education*. Available at:  
[https://www.heacademy.ac.uk/system/files/downloads/ukpsf\\_2011\\_english.pdf](https://www.heacademy.ac.uk/system/files/downloads/ukpsf_2011_english.pdf) (Accessed 25/04/2017).
- University of Bedfordshire. (2015) *Cre8: Changing worlds and futures thinking*. Available  
at: [https://www.beds.ac.uk/\\_\\_data/assets/pdf\\_file/0008/504458/tablehandout\\_A4final.pdf](https://www.beds.ac.uk/__data/assets/pdf_file/0008/504458/tablehandout_A4final.pdf) (Accessed 25/04/2017).